

A NEW SPECIES OF ACROLEPIOPSIS AND THE
DESCRIPTION OF THE FEMALE OF
A. CALIFORNICA (ACROLEPIIDAE)

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ABSTRACT. The family Acrolepiidae, of the superfamily Yponomeutoidea, includes three genera: *Digitivalva* Gaedike, *Acrolepiopsis* Gaedike, and *Acrolepia* Curtis. *Acrolepiopsis liliivora*, new species, from California and Oregon, is described herein; the male and female genitalia are illustrated. Adults have been reared from the bulbs of *Lilium washingtonianum*. The female of *A. californica*, previously unknown, also is described, and the genitalia are illustrated. The larvae are reported to feed on *Disporum hookeri*.

Additional key words: *Acrolepiopsis liliivora*, genitalia (male and female), *Lilium washingtonianum*, *Disporum hookeri*.

Acrolepiidae is a family in the superfamily Yponomeutoidea. It is represented in all zoogeographical regions and includes 84 described species in three genera: *Digitivalva* Gaedike (40 species), *Acrolepiopsis* Gaedike (35 species), and *Acrolepia* Curtis (9 species). In the Nearctic and Neotropical regions there are 15 described species, three in *Digitivalva*, ten in *Acrolepiopsis*, and two in *Acrolepia* (Gaedike 1984a, 1984b). Undoubtedly, more detailed study of each zoogeographical region will increase the number of known species.

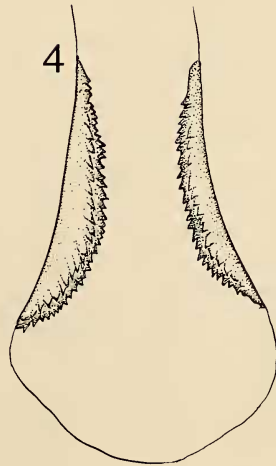
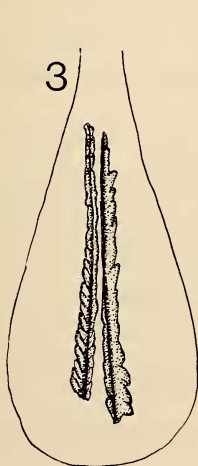
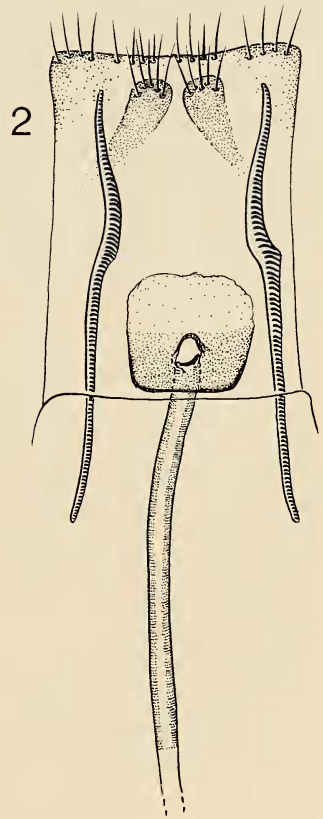
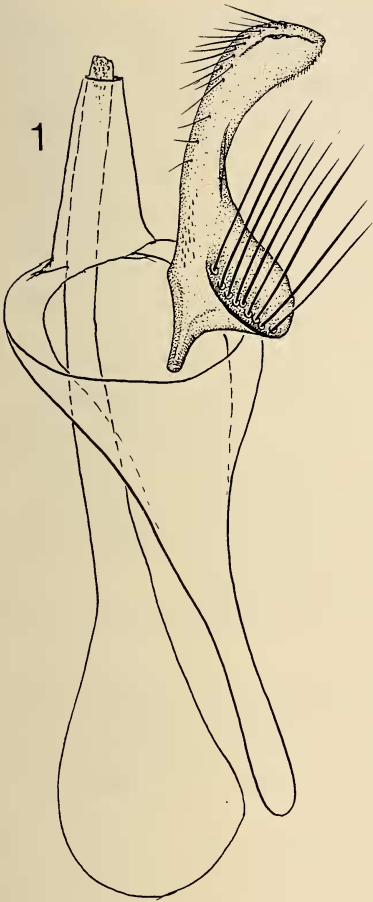
The known life histories indicate that acrolepiid larvae are leaf-skeletonizers or miners of leaves, fruit, or bulbs of Asteraceae (*Digitivalva*), Dioscoriaceae and Liliaceae (*Acrolepiopsis*), and Solanaceae (*Acrolepia*). While examining acrolepiid from the western United States, I discovered a new species of *Acrolepiopsis* and the previously undescribed female of *A. californica*. These are described below.

***Acrolepiopsis liliivora* Gaedike, new species**

Wingspan 15-16 mm. Head dark brown, except vertex light brown; labial palpi dark brown. Thorax dark brown. Forewing dark brown, with white triangular spot, sometimes overlaid with dark scales, extending obliquely forward from margin of dorsum at $\frac{1}{3}$ distance from base, with minute white dot on dorsum at base of cilia, and with individual light scales scattered throughout the dark area; cilia beneath apex pale distally. Males somewhat lighter brown than females. Male genitalia (Fig. 1): saccus elongate, narrow, apically rounded; valva with

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FIGS. 1-4. Genitalia of *Acrolepiopsis liliivora* Gaedike, new species. 1, Male genitalia; 2, Female genitalia (sterigma); 3, Female genitalia (signa); 4, Female genitalia (signa).



base broad, narrowest medially and expanded apically, costal margin concave; aedeagus more than 2.5 times valva length, broad basally, tapering to apex, with minute sclerotizations in vesica. Female genitalia (Figs. 2-4): Eighth segment with a pair of relatively narrow, somewhat clublike structures bearing setae on the broadly rounded base; ostium with rectangular sclerotization, the lower half more strongly sclerotized; ductus bursae strongly sclerotized over most of its length; corpus bursae with two long signa; signa slightly bent with dentate inner surface, the appearance variable depending upon the preparation.

Type locality: California: Auto Rest. (I have been unable to determine the exact location.)

Types: Holotype male: Auto Rest, Cal.[ifornia] 18. 8. [19]18, on *Lilium washingtonianum*, Coll. David Griffiths (genital slide R. Gaedike No. 2421). Paratypes: 1 male, 3 females, same data as holotype; 1 female Oregon, Santiam Natl. For., reared from bulb of *Lilium washingtonianum*, emerged 9. X. 1931. The holotype and three paratypes are deposited in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.; two paratypes are deposited in the Deutsches Entomologisches Institut (DEI) Eberswalde.

Biology: Larva in bulb of *Lilium washingtonianum* (Liliaceae), pupa in a net-like cocoon.

Remarks: All specimens are in poor condition. One female lacks forewings; another lacks a hindwing. The new species is closely related to *A. californica*. It differs in the coloration of the cilia below the apex, in having somewhat broader valvae and longer signa than *californica*.

Acrolepiopsis californica Gaedike, 1984

Entomol. Abh. Staatl. Mus. Tierk. Dresden 47(1983)10:183-184, Fig. 20.

In material sent to me by J. Powell there were four specimens of this species, two of which were females. Because the female was previously unknown, I describe the female genitalia below.

Female genitalia (Fig. 5): The pair of ventrolateral clublike structures bearing setae on the broadly rounded base, tapering to a point; ostium with a somewhat cup-shaped sclerotization, the lower half more strongly sclerotized; ductus bursae strongly sclerotized; signa short, with dentate inner surface.

Material examined: Two males, two females, as follow: One male: Calif.: El Dorado Co., Blodgett Forest, 13 mi E Georgetown, 4000-4500', 27/28.V.1978, leg. J. Powell. One male: Calif.: Siskyou Co., McCloud River at Ash Creek Rgr. Sta., 9.VI.1974, leg. J. Powell. One female: Calif.: Myers Flat, Humboldt Co., 14.VIII.1963, leg. J. Powell. One female: Calif.: Big Creek Reserve (UCNLWR), Monterey Co., 26./

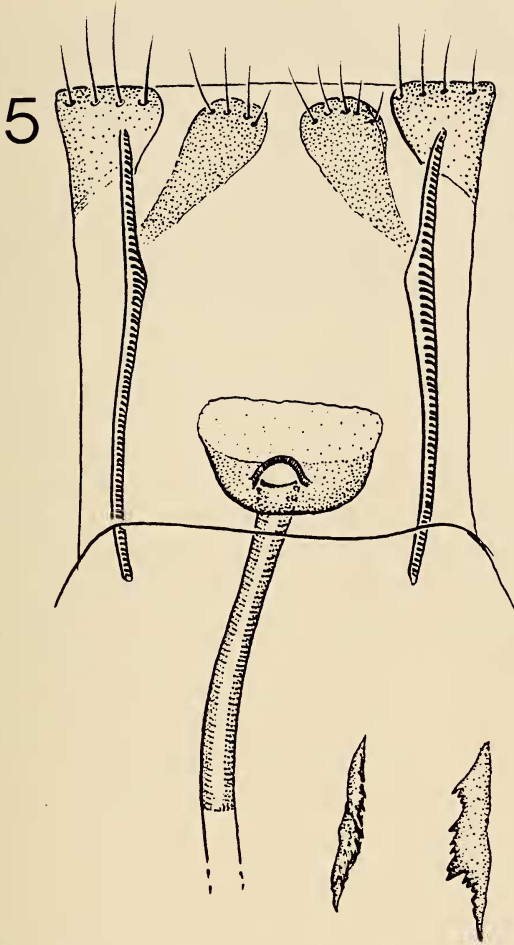


FIG. 5. Female genitalia of *Acrolepiopsis californica*.

28.V.1987, leg. J. Powell. These specimens are the first records of this species since its description.

Biology: J. Powell (*in litt.*) gives some remarks on the biology of this species: "... In late April [1990] I made additional collections of the larvae of *Acrolepiopsis* at Big Creek on *Disporum hookeri* and succeeded in rearing a few adults. This confirms the hostplant for the species represented by one specimen that I sent you from 1987. The larvae sometimes start to eating the inflorescence but sometimes do not; later they skeletonize the leaves, feeding on either upper or lower surfaces."

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